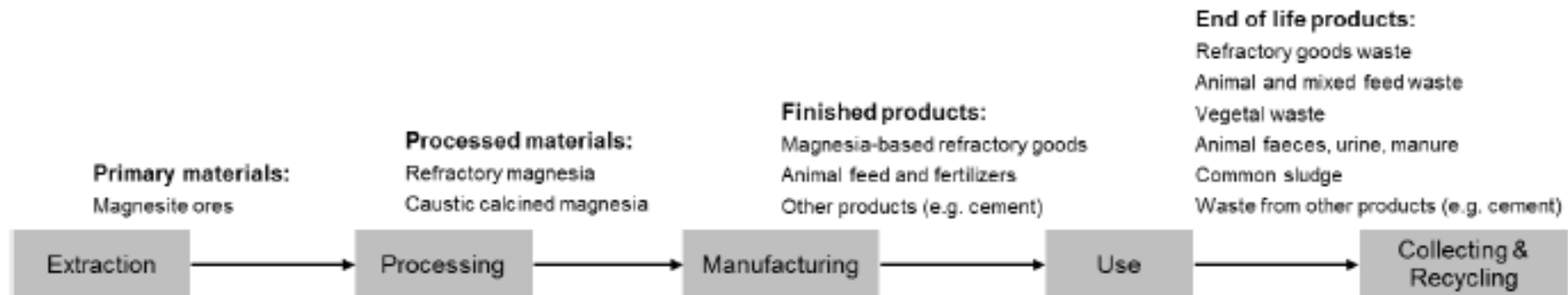


Magnesite

The MSA on magnesite focuses on natural magnesite only, therefore synthetic magnesia is not included in this study. Around 5% of the worldwide magnesia is produced from synthetic process from natural brines or seawater (mainly in Mexico, USA and Japan; EU countries are Ireland, Netherlands and France). The potential of synthetic magnesia is limited compared to natural magnesia due to high production costs. After extraction of magnesite ($MgCO_3$), the naturally occurring carbonate of magnesium, the raw material is processed into various forms of magnesia – caustic calcined magnesia, dead-burned magnesia and fused magnesia. Caustic calcined magnesia is used in agricultural and industrial (construction, steel, pharmaceutical, chemical) applications. These uses include feed supplement to cattle, fertilisers; electrical insulations, industrial fillers, in flue gas desulphurization, wastewater treatment and soil remediation agents; or as sorrel cement, in construction materials, etc. Dead-burned magnesia is used in various refractory applications, such as basic magnesia bricks, ladles, or in cement and glass making kilns. The main applications of fused magnesia are in refractory and electrical insulating markets. Moreover, part of the magnesite in the value chain is associated to biological flows: magnesia is an essential plant nutrient and it is an abundant element in the animal and human body. However due to the lack of data, only part of this cycle is accounted for in the MSA (MgO content in animal faeces, manure and vegetal waste, food waste and common sludge). The figure below presents the value chain of magnesite with the main uses.



โซ่คุณค่าของ Magnesite